

REMARKS/ARGUMENTS

Election/Restrictions

The final nature of the restriction requirement is acknowledged. In consequence, claims 1 to 37 have now been cancelled from this application without prejudice.

Specification

The Examiner objected to the Abstract. An amended version of the Abstract is presented herewith which overcomes the Examiner's objections.

The Examiner also objected to the Title. An amended version of the Title has also been provided. The new title is more descriptive, as required by the Examiner.

Claim Rejections – 35 USC § 112

The Examiner rejected claims 38 to 45 as indefinite as they do not make it clear whether the "supply of metal wires" is included in the claimed apparatus. The claims have consequently been amended for greater clarity. The claims have also been amended to define the invention more specifically.

Claim 38 has also been amended in the following additional respects. Firstly, the term "rolling passes" has been replaced by the clearer term "roll sets" – a term that was used in original claim 39. Both the original term and the revised term are intended to refer to cooperating sets of rollers such as 28,30 and 42,44 as shown in the drawings of the present application. It has also been made clear that the roll sets are configured for rolling each wire separately (rather than collectively after the wires have been assembled into a cable – see page 11, lines 28 to 33).

It has further been made clear in claim 38 that the roll sets are replaceable as an alternative to being adjustable (see page 4, lines 19 to 21). The adjustability or replaceability of the roll sets makes it possible to create cables of different gauge using the same apparatus supplied with wires all of the same cross-section. This is possible because the roll sets can be adjusted or replaced to create different amounts of cross-section reduction when creating cables of different gauge.

The claims dependent on claim 38 have been amended where necessary for consistency with the revised version of the main claim.

Claim Rejections – 35 USC § 102

The Examiner rejected claims 38, 42-43 and 44 as anticipated by Pemberton (US 3,760,093). Reconsideration of this rejection is requested for the following reasons.

Pemberton discloses an apparatus for assembling multiple wires into a cable, wherein successive multiple strands are pulled through dies to compress and compact the multiple strands in successive stages. There is no mention of the use of rollers (as asserted by the Examiner) to do this. The Examiner refers to rollers appearing in Figure 3, but there are no rollers shown in this figure, just wire drawing dies. These dies always act on multiple wire strands and not on individual wires before assembly into a cable. The Examiner may be assuming that a roller could be substituted for the wire drawing die, but that is not the teaching of Pemberton, and their function would still be to compress and compact a multiplicity of strands.

The Examiner comments that Pemberton discloses rotation. In the cited section, it is stated that the wire strands are rotated about a line corresponding to the axis of the central wire strand. This is used to provide a necessary twist to the wires in the final cable assembly. The wording is generalized by the Examiner to suggest that the description covers any sort of rotational motion in an apparatus regardless its purpose. However, there is no disclosure of rotation between successive rolling passes of individual wires before assembly into a strand or cable.

Claim 38 of the present application claims an apparatus that includes equipment for assembling and stranding the wires into a cable. Pemberton discloses equipment for assembling the wires into a cable as well. Figure 1 of the present application, for example, shows dies 52 and 68 corresponding to the dies of Pemberton. The downstream apparatus 10 furthermore rotates about an axis in line with the central wire, just as in Pemberton. However, the claimed apparatus also includes additional forming rollers (e.g. shown as 28,30 and 42,44 in Figure 1) that provide deformation and shaping to each wire individually. This is in addition to the basic

compacting function of the machine and therefore represents a feature not considered in the apparatus of Pemberton. These rollers are in no way part of the apparatus 10 (which “rotates”) having completely separate position in the apparatus and completely different function. It is to be noted that claim 38 also requires the roll sets to be adjustable or replaceable so that cables of different gauges can be produced from wires all having the same cross-section. Such a feature is not disclosed in Pemberton.


There is no suggestion in Pemberton that the wires are individually rolled within the apparatus. The dies illustrated apply deformation to groups of wires and therefore the shape that each individual wire takes on depends on the deformation load and the position and number of neighbouring wires. Even if the dies were rollers, as incorrectly stated by the Examiner, this would still be the case. This produces the sorts of shapes of wires illustrated in Figures 1 and 2 of Pemberton. The apparatus of the present claims uses the rollers to define the shape of each individual wire by acting separately on each wire. The overall intent of the rollers of the present claims is to reshape the wires and reduce the wire cross section before assembling the strands and passing multiple strands through a die. By deforming each wire separately, the shape of each wire is independently controlled. It is therefore believed that the claims of the present application, as currently amended, are not anticipated by Pemberton.

Claim Rejections – 35 USC § 103

The Examiner rejected claims 39-41 and 45 as being unpatentable over Pemberton. However, it is submitted that claim 38, at least as now amended, is neither anticipated by nor obvious over Pemberton, so any claim dependent on claim 38 should be considered allowable at least for the same reason as claim 38. Pemberton is entirely silent regarding the reduction of area of individual wires before assembly into a cable, and to the adjustability required to create cables of different gauges from a set of wires all of the same initial cross-section. Consequently, Pemberton is not relevant to the present invention.

In view of the above arguments and amendments, favorable reconsideration of this application is requested.

Respectfully,



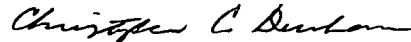
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